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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,  
NORTHERN CALIFORNIA, 1 AUGUST 1975

K. J. Hill, et al

Teledyne Geotech

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**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT**  
**Northern California, 1 August 1975**

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**January 1976**

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**312 Montgomery Street, Alexandria, Virginia 22314**

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SDCS EVENT REPORT NO. 52

Northern California, 1 August 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	$m_b$	$M_s$
NORSAR	20:31:33.0	20:20:02	38 N	121 W	5.8	N/A
Hagfors	20:31:48.9	20:20:48	44 N	115 W	6.5	5.7

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

20:20:06.1    38.6N    122.0W    5.8    5.3

RK-ON was not operational for this period.

Short-period signals associated with this event were recorded at WH2YK, CPSO, HN-ME, FN-WV, LASA and NORSAR. Horizontal SP channels at CPSO, FN-WV and HN-ME were rotated. At WH2YK horizontal SP channels were not rotated due to excessive noise on the SP transverse channel.

Long-period signals were recorded at WH2YK, CPSO, HN-ME, FN-WV, ALPA and NORSAR. At FN-WV the signal arrival occurred during the LP frequency response calibration. Horizontal LP channels at WH2YK and HN-ME were rotated. At CPSO horizontal LP channels were not rotated due to signal clipping on the LP east channel. The horizontal LP channels at FN-WV were not rotated due to signal arrival at calibration time. Validity of the ALPA and NORSAR long-period vertical beams is uncertain and horizontal channels were not included due to program recovery problems. LASA long-period array data were not recoverable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

# STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

# HYPOCENTER DETERMINATION

INPUT FOR EVENT 1 AUG 75  
20:20:02.0 38.000N 121.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST		
IAC	20 23 26.6	0.2	0.2	14.2	49.9
WH2YK	20 25 17.3	-0.3	0.1	23.6	344.0
CFC	20 26 08.2	0.2	0.7	29.1	84.4
FN-WV	20 26 42.0	-0.2	-0.1	33.0	76.4
HN-ME	20 27 40.3	-0.5	-1.0	40.0	61.1
NAO	20 31 41.0	0.6	0.1	73.7	22.0

## 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
20:20:05.7	38.800N	121.711W	58. CAIC	0.4	3	6
20:20:06.1	38.552N	121.983W	0. REST	0.6	3	6

CAIC				REST			
0	.	1		0	.	1	
0	.		0	0	.		0
0	1.	1	3	0	1.	1	3
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.		0	0	.		0
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.64  
MAJCF 74.7KM. MINCF 36.9KM. AZ= 27 AREA= 8659 SQ.KM. REST

# DATA SUMMARY

INPUT FOR EVENT 1 AUG 75  
20:20:02.0 38.000N 121.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
IAC M	EP	20	23 26.6	SAB	1.6	645.	6.06			14.2
WH2YK	EP	20	25 17.3	SPZ	2.8	589.	5.77			23.6
WH2YK	LR	20	35 14.0	IFZ	17.0	743.		5.36		23.6
CFC	EP	20	26 08.2	SPZ	2.0	1248.	6.40			29.1
CFC	LR	20	38 05.0	IPZ	20.0	9999.		0.0		29.1
AIFA	LR	20	39 15.0	IFZ	21.0	110.		4.65		30.6
FN-WV	EP	20	26 42.0	SPZ	2.2	274.	5.84			33.0
HN-ME	EP	20	27 40.3	SPZ	1.0	105.	5.12			40.0
HN-ME	LQ	20	41 25.0	LFT	22.0	488.				
HN-ME	LR	20	44 09.0	LFZ	21.0	1513.		5.90		40.0
NAC	EP	20	31 41.0	AB	1.0	200.	5.83			73.7
NAC	LR	21	03 06.0	IPZ	17.0	257.		5.40		73.7

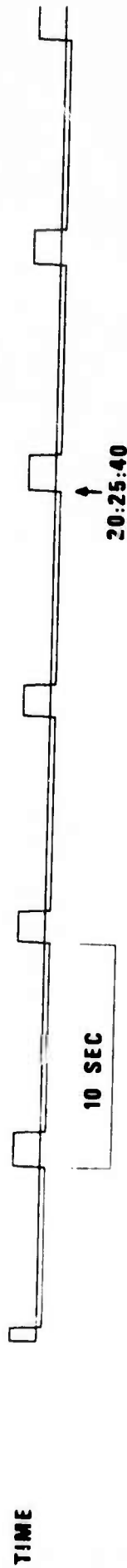
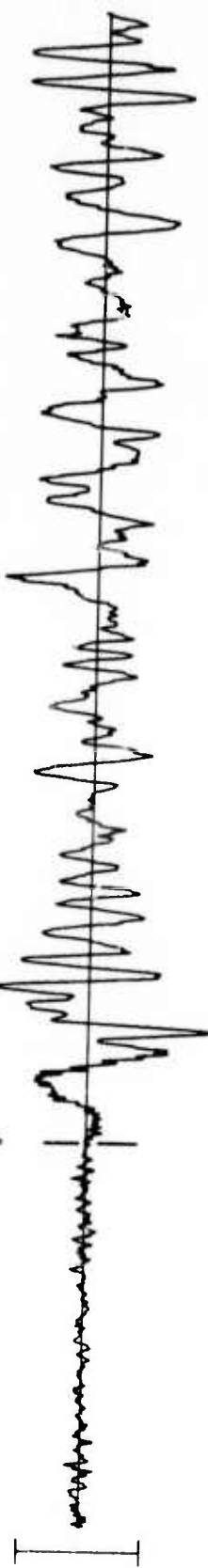
ORIGIN	IAT.	LCNG.	DEPTH (KM)	MAG	SDV	STA	IPMAG	LPDV	LPSTA
20:20:15.7	38.889N	121.711W	58. CALC	5.74	0.36	5	5.32	0.5	4
20:20:06.1	38.552N	121.983W	0. REST	5.79	0.45	5	5.33	0.5	4

IAC NOT USED IN CALC RUN SP AVG. MAG.  
IAC NOT USED IN REST RUN SP AVG. MAG.

Short-period magnitudes (mb) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

WH2YK 01 AUG 75

20:25:17.3  
↓

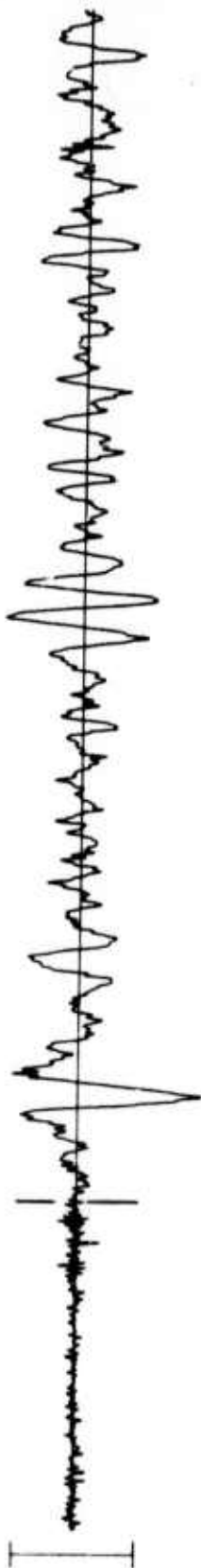




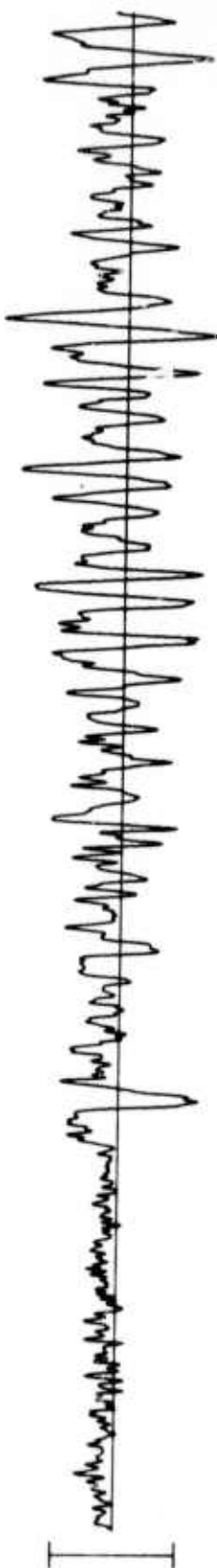
CPSO 01 AUG 75

20:26:08.2  
↓

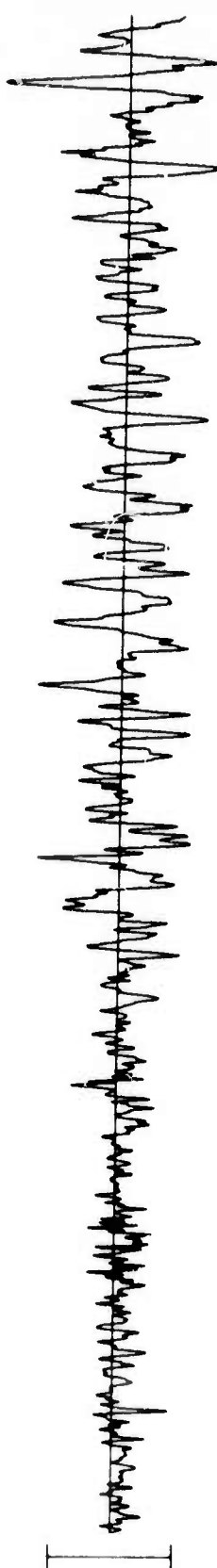
SPZ  
316.890 MHz



SPR  
69.15 MHz



SPT  
45.32 MHz



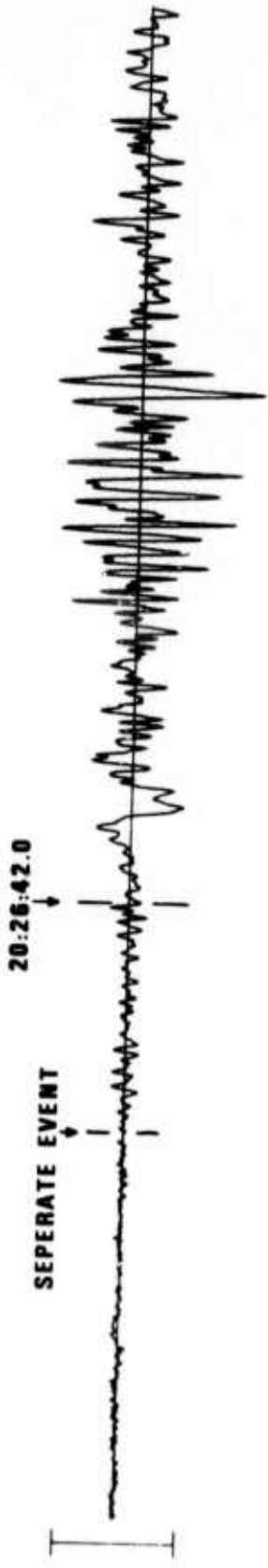
TIME



20:26:30  
↑

FN-WV 01 AUG 75

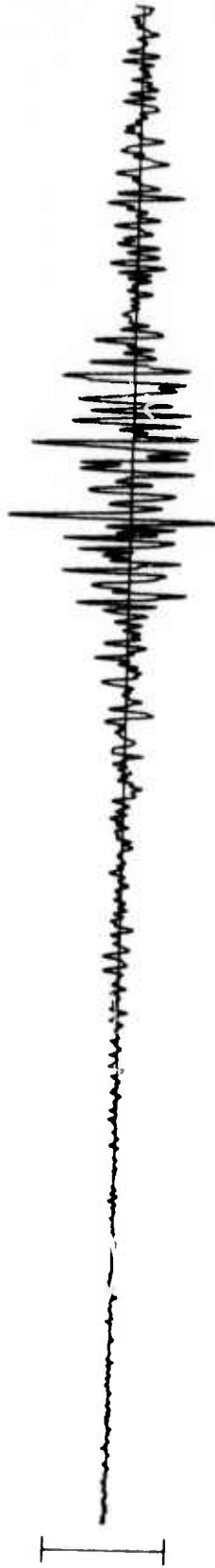
SPZ  
127.19 MP



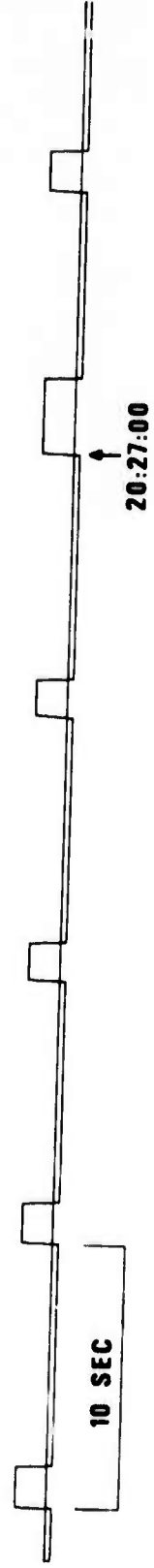
SPR  
133.70 MP



SPT  
183.02 MP



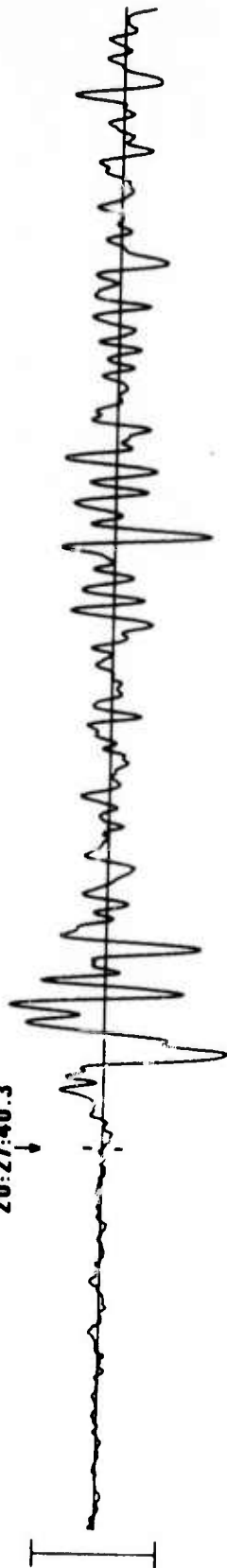
TIME



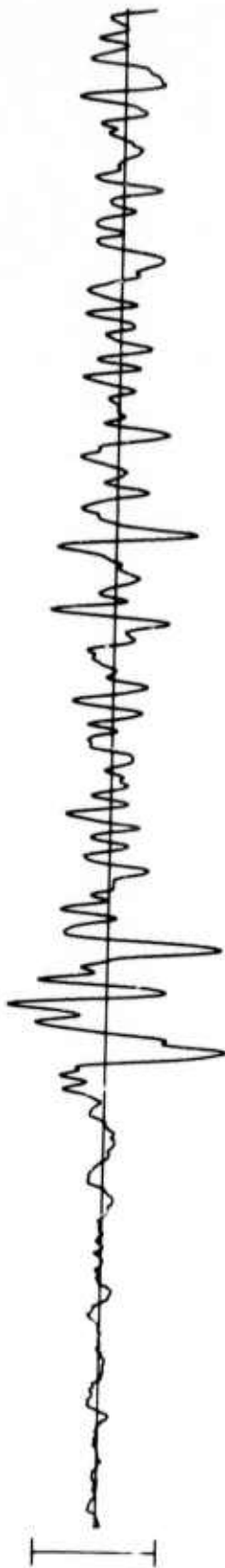
HN-ME 01 AUG 75

SPZ  
76.17 Mμ

20:27:40.3



SPR  
46.04 Mμ



SPT  
18.63 Mμ



TIME

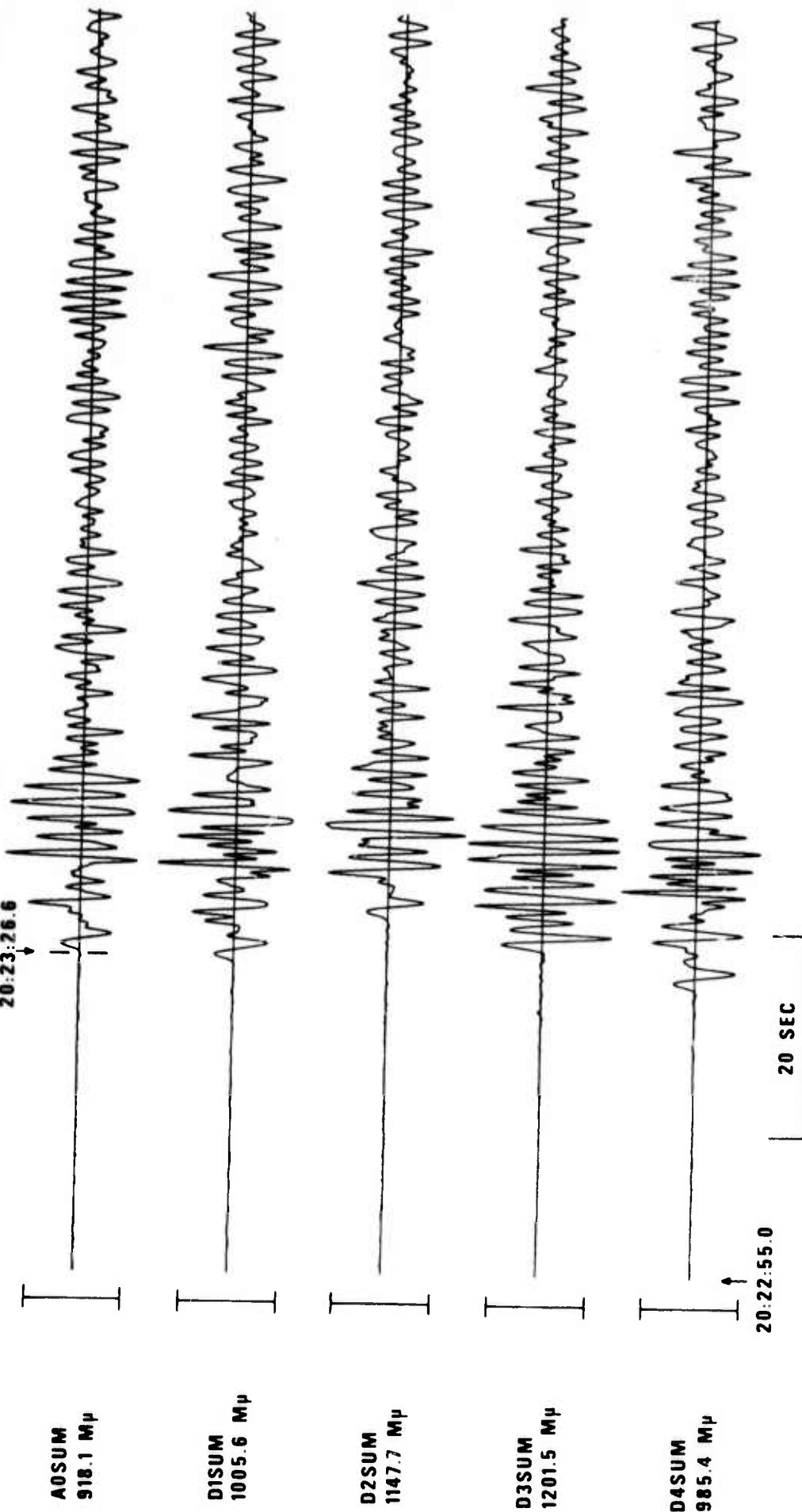


10 SEC

20:28:00

8<

LASA INFINITE VELOCITY SUBARRAY SUMS 01 AUG 75



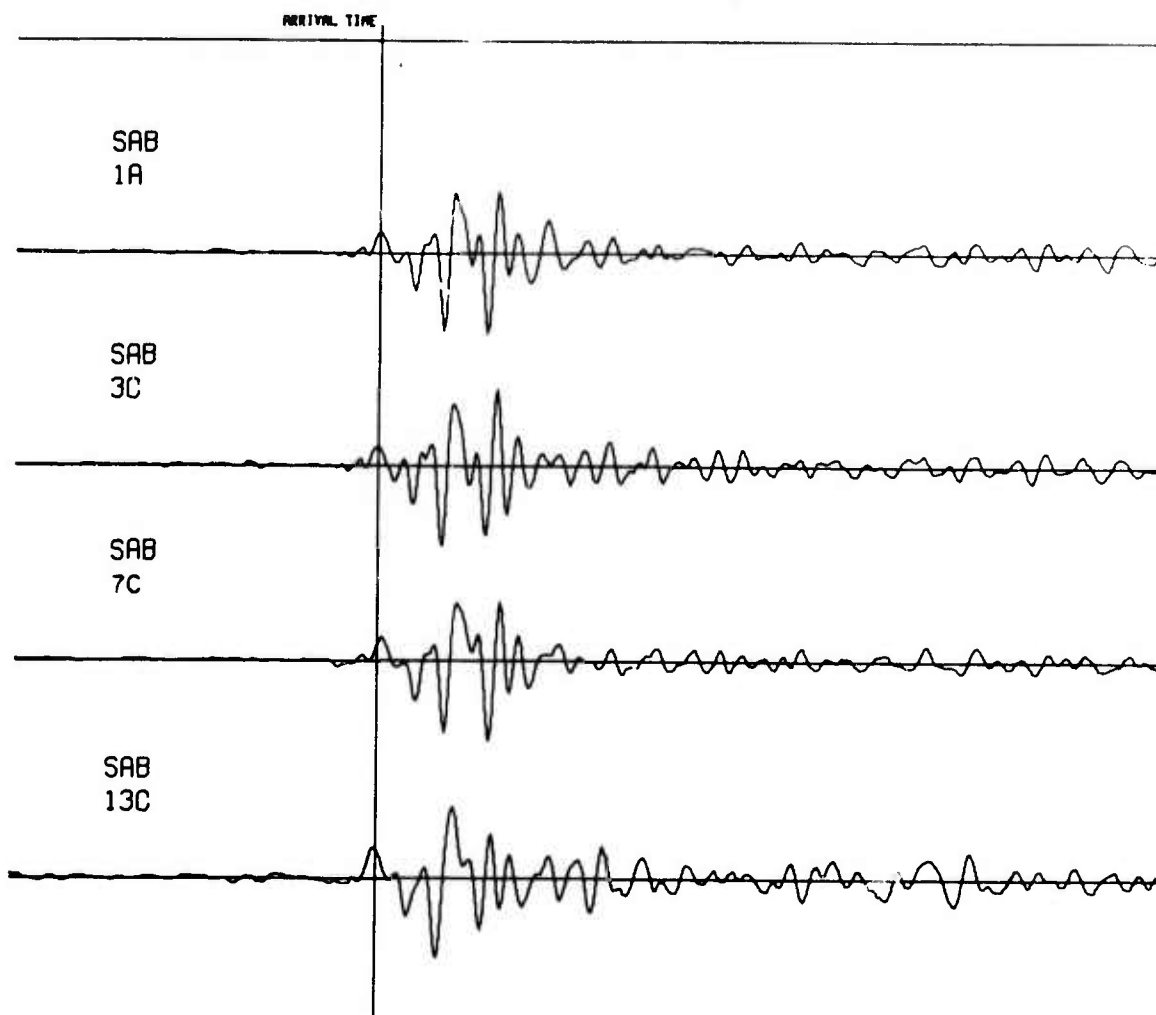
# NORSAR EVENT FILE

1975 AUG 1

EPX NO. 77800 ARR. 20.31.42.8 38.1N 120.7W 5.7MB 33KM

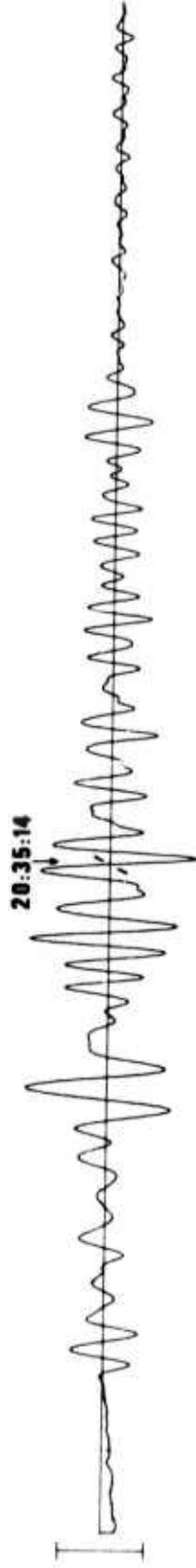
DIST = 73.8 AZI = 322.1 AMP = 67.2 PER = 0.9  
AB

— = 5 SECONDS



WH2YK 01 AUG 75

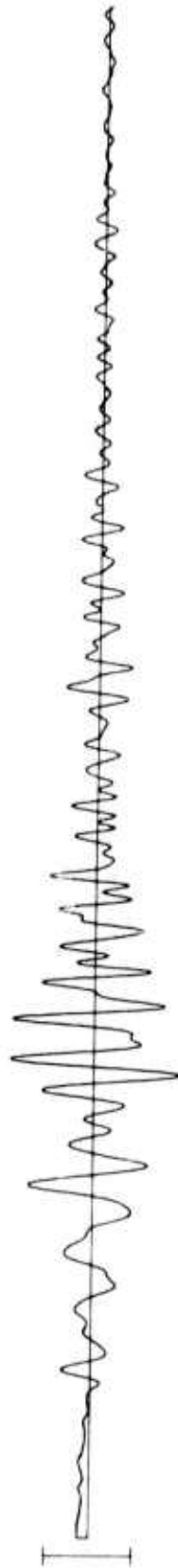
LPZ  
5665.44 MHz



LPR  
4571.91 MHz



LPT  
3062.88 MHz



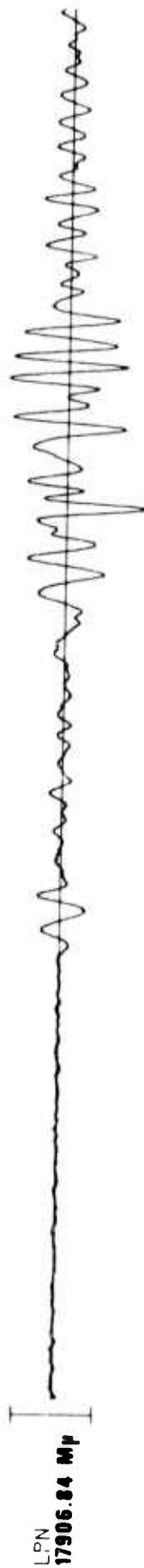
TIME



11<

CPSO 01 AUG 75

20:38:05



TIME



2 MIN

20:35:00

12<

HN-ME 01 AUG 75

20:44:09



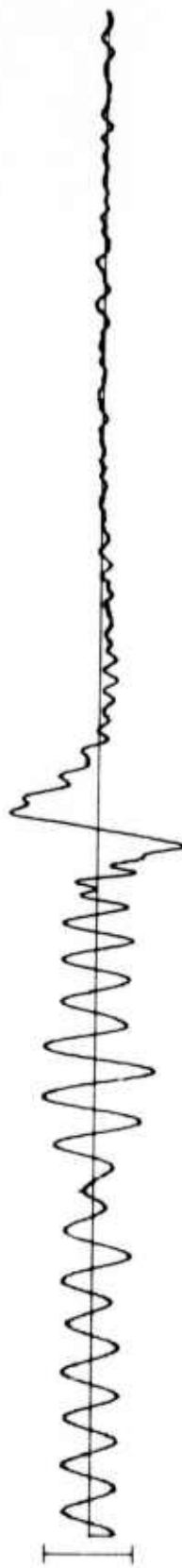
TIME





FN-WV 01 AUG 75

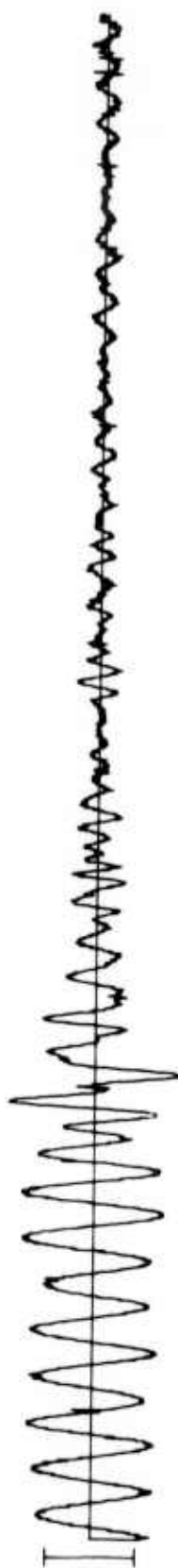
LPZ  
515.34 MHz



LPR  
307.64 MHz



LPT  
239.90 MHz



TIME

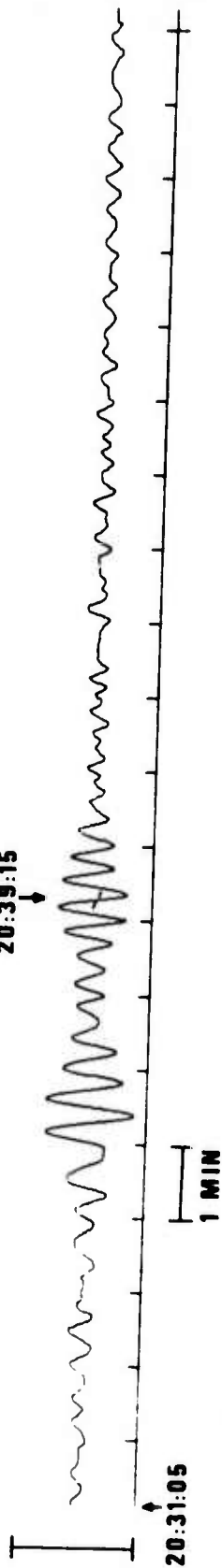


# ARRAY LONG PERIOD VERTICAL BEAMS 01 AUG 75

ALPA

LP VERTICAL  
6200.43 M $\mu$

20:39:15



NORSAR

LP VERTICAL  
4898.53 M $\mu$

21:03:06

